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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,772	03/07/2002	Mark Melvin Butterworth	MP0973(13036/14	2557

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EXAMINER
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PERUNGAVOOR, SATHYANARAYA V

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/092,772	<b>Applicant(s)</b> BUTTERWORTH, MARK MELVIN	
	<b>Examiner</b> Sath V. Perungavoor	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-7,9-13 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,9-13 and 15-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

[1] A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 10, 2006 has been entered.

### ***Response to Arguments/Amendments***

[2] Presented arguments have been fully considered, but are rendered moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

[3] Claims 1, 7 and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 1, the claim limitation, “**comparing the plurality of electronic text files with one another based on the sequence and direction information to identify a character sequence appearing in common in the electronic text files corresponding to the partially overlapping images of adjacent portions of the document**”. Comparison based on direction information is not disclosed in the disclosed in the application as initially filed.

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Only citation of the direction information appears at specification page 8, paragraph 2; however that citation does not describe comparison as recited in the claims.

Regarding claim 7, the claim limitation, “controller configured compare the electronic text filed based on the sequence and **direction information**”. Comparison based on direction information is not disclosed in the disclosed in the application as initially filed. Only citation of the direction information appears at specification page 8, paragraph 2; however that citation does not describe comparison as recited in the claims.

Regarding claim 12, the claim limitation, “compare the electronic text files based on he sequence and **direction information**”. Comparison based on direction information is not disclosed in the disclosed in the application as initially filed. Only citation of the direction information appears at specification page 8, paragraph 2; however that citation does not describe comparison as recited in the claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[4] Claims 1, 5, 7, 10, 12 and 16 are rejected under 35 U.S.C. 103(a) as being obvious over Nakabayashi [US 5,675,672] in view of Blalock et al. (“Blalock”) [US 5,729,008].

Regarding claim 1, Nakabayashi discloses the following claim limitations:

A method of processing a document that includes a plurality of characters [fig. 3], the method comprising: capturing a plurality of partially overlapping digital images of the document with an image capture device [56 and 60 on fig. 3, col. 5 ll. 19-39: *First file (first image) and second file (second image) are overlapping.*]; maintaining image sequence information identifying a sequential order in which the partially overlapping images were captured [col. 4, ll. 45-48]; performing optical character recognition on the plurality of captured partially overlapping digital images (*i.e.* 58 and 62), to generate a corresponding plurality of electronic text files [58 and 62 on fig. 3; col. 5, ll. 19-33]; comparing the plurality of electronic text files with one another based on the sequence and direction information (*i.e.* *top, bottom, left and right*) to identify a character sequence appearing in common in the electronic text files corresponding to the partially overlapping images of adjacent portions of the document [col. 5, ll. 36-39; col. 4, ll. 43-48 and 54-58; *adjacent files are compared based on sequence information*]; and combining the plurality of electronic text files into a combined text file based on the comparison and in a manner consistent with the sequence and direction (*i.e.* *top, bottom, left and right*) information [col. 5, ll. 40-48 and 57-60; col. 4, ll. 54-58].

Nakabayashi does not explicitly disclose the following claim limitations:

receiving direction information indicative of a direction of relative movement between the image capture device and the document during the capture of the plurality of partially overlapping digital images;

However, in the same field of endeavor Blalock discloses the deficient claim limitations, as follows:

receiving direction information indicative of a direction of relative movement between the image capture device and the document during the capture of the plurality of partially overlapping digital images [*col. 8, ll. 21-30*];

Nakabayashi and Blalock are combinable because they are from the same field of document imaging.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Nakabayashi with Blalock to track direction of movement, the motivation being to aid in arranging the captured overlapping image portions [*col. 8, ll. 21-30*].

Regarding claim 5, Blalock meets the claim limitations, as follows:

The method of claim 1, wherein the plurality of partially overlapping digital images are captured with a digital camera, the method further comprising: automatically detecting the direction information [*col. 6, ll. 42-46: direction information is determined correlation between images without human intervention.*].

Regarding claim 7, Nakabayashi discloses the following claim limitations:

A digital camera (*i.e. 120, handheld scanner*) comprising [*fig. 1*]: an image sensor for generating a plurality of partially overlapping digital images based on optical images directed onto the image sensor by the lens [*120 on fig. 7, 56 and 60 on fig. 3, col. 5 ll. 19-33: First file (first image) and second file (second image) are overlapping.*], a memory (*i.e. 112*)

for storing image sequence information representing an order in which the plurality of digital images were captured [*col. 4, ll. 45-48; 112 on fig. 7*]; and to perform optical character recognition (*i.e. 58 and 62 on fig. 3*) on the plurality of partially digital images (*i.e. 56 and 60 on fig. 3*), to generate electronic text files corresponding to the plurality of partially overlapping digital images [*col. 5, ll. 19-33*], the controller configured compare the electronic text filed based on the sequence and direction information (*i.e. top, bottom, left and right*) to identify overlapping text appearing electronic text files corresponding to adjacent partially overlapping digital images [*col. 5, ll. 36-39; col. 4, ll. 43-48 and 54-58; adjacent files are compared based on sequence information*]; and to stitch the text in the plurality of text files together based on the identified overlapping text consistent with the image sequence information and the received direction information (*i.e. top, bottom, left and right*) [*col. 5, ll. 40-48 and 57-60; col. 4, ll. 54-58*].

Nakabayshi does not explicitly disclose the following claim limitations:

a lens; a controller coupled to the image sensor and configured to receive direction information indicative of a direction of movement of the digital camera during capture of the plurality of digital images

However, in the same field of endeavor Blalock discloses the deficient claim limitations, as follows:

A digital camera (*i.e. 10*) comprising [*fig. 1*]: a lens [*col. 4, ll. 36-40; optics*]; a controller coupled (*i.e. 25*) to the image sensor (*i.e. 24*) and configured to receive direction information indicative of a direction of movement of the digital camera during capture of the plurality of digital images [*col. 8, ll. 21-30; fig. 3*];

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Nakabayshi and Blalock are combinable because they are from the same field of document scanning.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Nakabayashi with Blalock to track direction of movement, the motivation being to aid in arranging the captured overlapping image portions [col. 8, ll. 21-30].

Regarding claim 10, all claimed limitations are set forth and rejected as per discussion for claim 5.

Regarding claim 12, Nakabayshi discloses the following claim limitations:

An electronic device including a digital camera [120 on fig. 1], the electronic device comprising: a display screen for displaying images captured with the digital camera [116 on fig. 7]; an input device for inputting information into the electronic device [118 on fig. 7]; a memory for storing image sequence information representing an order in which the plurality of digital images were captured [col. 4, ll. 45-48; 112 on fig. 7]; and a processor configured to perform optical character recognition (i.e. 58 and 62) on digital images captured with the digital camera (i.e. 56 and 60) and generate corresponding electronic text files [fig. 3; co. 5, ll. 19-33],

the processor configured to compare the electronic text files based on the sequence and direction information (i.e. top, bottom, left and right) to identify overlapping text appearing in the electronic text files corresponding to adjacent overlapping digital images [col. 5, ll. 36-39; col. 4, ll. 43-48 and 54-58; adjacent files are compared based on



*sequence information*], and to stitch text from the electronic text files together based at least in part on the overlapping text [col. 5, ll. 34-39], the order in which the digital images are captured [col. 4, ll. 45-48].

Nakabayshi does not explicitly disclose the following claim limitations:

and to stitch text from the electronic text files together based at least in part on direction information indicative of a direction of relative movement between digital camera and the document while the digital images are being captured.

However, in the same field of endeavor Blalock discloses the deficient claim limitations, as follows:

and to stitch text from the electronic text files together based at least in part on direction information indicative of a direction of relative movement between digital camera and the document while the digital images are being captured [col. 3, ll. 23-26; col. 8, ll. 21-30].

Nakabayshi and Blalock are combinable because they are from the same field of document scanning.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Nakabayshi with Blalock to track direction of movement, the motivation being to aid in arranging the captured overlapping image portions [col. 8, ll. 21-30].

Regarding claim 16, all claimed limitations are set forth and rejected as per discussion for claim 5.

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[5] Claims 4, 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakabayshi in view of Blalock further in view of Fisher et al. ("Fisher") [US 2001/0030693 A1].

Regarding claim 4, Nakabayshi and Blalock disclose the claim limitations as set forth in claim 1.

Nakabayshi and Blalock do not explicitly disclose the following claim limitations:

The method of claim 1, wherein the plurality of partially overlapping digital images are captured with a digital camera, the method further comprising: providing the direction information with a user input device of the digital camera

However, in the same field of endeavor Fisher discloses the deficient claim limitations, as follows:

The method of claim 1, wherein the plurality of partially overlapping digital images are captured with a digital camera, the method further comprising: providing the direction information with a user input device of the digital camera [Paragraph 0055].

Nakabayshi, Blalock and Fisher are combinable because they are from the same field of image processing.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Nakabayshi and Blalock with Fisher to have the user input direction information, the motivation being to give more freedom to scanning direction [Paragraph 0055].

Regarding claims 9 and 15, all claimed limitations are set forth and rejected as per discussion for claim 4.

[6] Claims 6, 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakabayshi in view of Blalock further in view of Nakao [US 6,459,819].

Regarding claim 6, Nakabayshi and Blalock disclose the claim limitations as set forth in claim 1.

Nakabayshi and Blalock do not explicitly disclose the following claim limitations:

The method of claim 1, wherein the plurality of digital images are captured automatically at a predefined time interval.

However, in the same field of endeavor Nakao discloses the deficient claim limitations, as follows:

The method of claim 1, wherein the plurality of digital images are captured automatically at a predefined time interval [col. 9, ll. 28-31].

Nakabayshi, Blalock and Nakao are combinable because they are from the same field of document imaging.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Nakabayshi and Blalock with Nakao to automatically capture images in a predefined time interval, the motivation being ensure overlap among successive images [col. 9, ll. 28-31].

Regarding claims 11 and 17, all claimed limitations are set forth and rejected as per discussion for claim 6.

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[7] Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakabayshi in view of Blalock further in view of Omura et al. ("Omura") [US 2001/0055121 A1].

Regarding claim 13, Nakabayshi and Blalock disclose the claim limitations as set forth in claim 12.

Nakabayshi and Blalock do not explicitly disclose the following claim limitations:

The electronic device of claim 12, wherein the electronic device is one of a cellular telephone, a personal digital assistant device, and a laptop computer.

However, in the same field of endeavor Omura discloses the deficient claim limitations, as follows:

The electronic device of claim 12, wherein the electronic device is one of a cellular telephone (*i.e.* 340), a personal digital assistant device, and a laptop computer [*fig. 9*].

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Nakabayshi and Blalock with Omura to image and process images with a cellular telephone, the motivation being enable portable processing [*page 1, para. 0009*].

### ***Contact Information***

[8] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Sath V. Perungavoor whose telephone number is (571) 272-7455. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

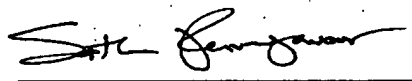
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Bhavesh M. Mehta whose telephone number is (571) 272-7453, can be reached on Monday to

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Friday from 9:00am to 5:00pm. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dated: November 27, 2006 .

By: 

Sath V. Perungavoor  
Telephone: (571) 272-7455

For: Bhavesh M. Mehta

  
**BHAVESH M. MEHTA**  
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